

ABSTRACT

A process utilizing PET as a reactive constituent to manufacture other polymers containing the pre-condensed moieties by the rapid transesterification of the condensation polymer with a pre-made modifying polymer containing the desired mix of other monomers. The process involves as a first step the manufacture of a modifying polymer containing the desired mix of acids and alcohols to a specific molecular weight such molecular weight dependent on the desired final level of utilized condensation polymer and the finished molecular weight. The second step of the process involves the rapid buildup of molecular weight and/or polymer uniformity by the rapid transesterification of the condensation polymer with the modifying polymer. The second step can be performed in any suitable vessel including an extrusion line. The process has the advantage of greatly reduced cycle times over other condensation polymer utilization processes such as the recycling of PET into other materials.

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